AMENDMENTS TO SPECIFICATION

In the Specification:

On page 1, immediately after the title, please insert:

PRIOR APPLICATION DATA

--This application is a National Phase application of PCT International Application No. PCT/IL2004/000535, International Filing Date: June 17, 2004, claiming priority from U.S. Provisional Patent Application Serial Number 60/479,186, entitled "PERTURBED MEMBRANE-BINDING COMPOUNDS" filed June 18, 2003; U.S. Provisional Patent Application Serial Number 60/491,292, entitled "PERTURBED MEMBRANE-BINDING COMPOUNDS" filed July 31, 2003; U.S. Provisional Patent Application Serial Number 60/505,445, entitled "PERTURBED MEMBRANE-BINDING COMPOUNDS" filed September 25, 2003 and U.S. Provisional Patent Application Serial Number 60/523,115, entitled "PERTURBED MEMBRANE-BINDING COMPOUNDS" filed November 19, 2003 all of which are incorporated by reference in their entirety.--

Please replace the paragraph beginning on line 2 and ending on line 6 of page 10 with the following paragraph:

-- **Fig. 1**: Selective binding of NST705 to Jurkat cells undergoing apoptosis induced by anti-Fas Ab; flow-cytometric analysis; **Fig. 1A and Fig. 1B** ~~is~~ are a FACS dot plot which describes the uptake of NST705 compound into the population of apoptotic cells in control and anti-Fas treated cultures, respectively. **Fig. ~~1B~~ 1C** is a histogram analysis of the data presented in Figs. 1A **and 1B**. ---

Please replace the paragraph beginning on line 7 and ending on line 11 of page 10 with the following paragraph:

---**Fig. 2:** Selective binding of NST703 to Jurkat cells undergoing apoptosis induced by anti-Fas Ab; flow-cytometric analysis; **Fig. 2A and Fig. 2B** ~~is~~ are a FACS dot plot which describes the up-take of NST703 compound into the population of apoptotic cells in control

and anti-Fas treated cultures, respectively. **Fig. ~~2B~~ 2C** is a histogram analysis of the data presented in Figs. 2A **and 2B**. --

Please replace the paragraph beginning on line 15 and ending on line 19 of page 10 with the following paragraph:

---**Fig. 4:** Selective binding of DC to cultured Jurkat cells undergoing apoptosis induced by anti-Fas Ab; flow-cytometric analysis; **Figs. 4A** and **4B** are dot plots showing the uptake of DC of control non-treated cells (4A) and cells upon induction of apoptosis (4B); **Fig. 4C** is a flow-cytometric (FACS) histogram representation of the data shown in Fig 4A **and 4B**.---

Please replace the paragraph beginning on line 3 and ending on line 5 of page 11 with the following paragraph:

--- ~~**Figs.**~~ **Fig. 7 (A-C)**: Selective binding of NST732 to murine lymphoma cells undergoing cell death induced by irradiation *in vivo*: **7A:** H&E staining **7B:** binding of NST732; fluorescent microscopy; **7C:** TUNEL staining. ---

Please replace the paragraph beginning on line 6 and ending on line 7 of page 11 with the following paragraph:

--- ~~**Figs.**~~ **Fig. 8 (A-D)**: Detection of cell death by NST 732, following middle cerebral artery (MCA) occlusion; computerized fluorescent imaging. ---

Please replace the paragraph beginning on line 29 on page 12 and ending on line 9 on page 13 with the following paragraph:

---The term "significant amount" according to the invention means that the amount of PMBC bound to a PNOM-cell is at least 30% higher than the amount bound to a non-PNOM-cell. In another embodiment of the invention, the amount may be at least 50%. In another embodiment, the amount may be at least 60%. In another embodiment, the amount may be at least 70%. In another embodiment, the amount may be at least 80%. In another embodiment, the amount may be at least 90%. In another embodiment, the amount may be at

least 95%. In another embodiment, the amount may be at least 150%. In another embodiment, the amount may be at least 200%. In another embodiment, the **amount** may be more than 5 times than the **amount** binding to a non PNOM-cell. The method for determining the actual amount may vary according to the imaging method and equipment utilized, and according to the organs or tissues examined.---

Please replace the paragraph beginning on line 21 and ending on line 26 on page 13 with the following paragraph:

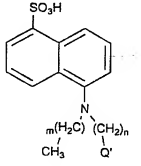
---In an embodiment of the invention, the compounds of the invention may be linked to any one of the following agents or to combinations thereof, thus creating a "PMBC-Conjugate" or "Conjugate". The linkage can be either directly, or via a linker, wherein the linker is selected from a C_1, C_2, C_3, C_4, C_5 or C_6 alkylene, 5 or 6 atom aromatic or heteroaromatic ring, a metal chelator and combinations thereof, wherein the agents may be as follows:---

Please replace the paragraph beginning on line 1 and ending on line 12 on page 14 with the following paragraph:

---ii. A drug, for the prevention, amelioration or treatment of a specific disease which manifests occurrence of PNOM-cells. The drug may be, without being limited, any drug such as: (i) An inhibitor of apoptosis, (e.g., caspase inhibitor, antioxidant, modulator of the Bcl-2 system); (ii) An activator of cell death, an inducer of apoptosis (e.g., an anticancer drug); (iii) A modulator of blood coagulation, selected from an anticoagulant, an antithrombotic, or a thrombolytic agent. According to this embodiment the drug may be selected from an antiplatelet agent, heparin, low molecular weight heparin, antagonists of glycoprotein IIb/IIIa, tissue plasminogen activator (tPA), or an inhibitor of a clotting factor, such as an inhibitor of thrombin or an inhibitor of factor Xa; (iv) An anti-inflammatory drug or an immuno-modulator drug; or (v) Certain radioactive atoms may also be cytotoxic if delivered in sufficient doses.---

Please replace the paragraph beginning on line 8 and ending on line 14 on page 25 with the following paragraph:

---In another embodiment there is provided a method of selective targeting PNOM-cells, comprising the steps described above using a compound represented by the structure as set forth in formula (XIV):



(XIV)

wherein n stands for an integer of 1, 2, 3, 4, 5 or 6, m stands for an integer of 0, 1, 2 or 3 and Q' **stands for** hydrogen, –OH or -F.---

Please replace the paragraph beginning on line 8 and ending on line 17 on page 29 with the following paragraph:

---In an embodiment, the invention provides a method of detecting a PNOM-cell in the brain of an examined subject, the method comprising: (i) administering **a** to the examined subject ~~**comprising**~~ a compound according to the structure set forth in any one of formulae I, IV, V, VI, VII, VIII, IX, X, XI, XII, XIII, XIV, XV or XVI, wherein the compound comprises or is linked to a marker for imaging or a labeled metal chelate; and (ii) determining the amount of the compound bound to cells in the brain, wherein a significant amount of the compound bound to a cell indicates its being a PNOM-cell. The ability of the PMBC of the invention to detect PNOM cells in the brain is demonstrated in Examples 11 and 12 and in Figures 8 and 9.---

Please replace the paragraph beginning on line 12 and ending on line 19 on page 36 with the following paragraph:

---In another aspect, the present invention provides a method for improving the treatment, inhibition or prevention of a medical disorder, by creating a PMBC-Conjugate, comprising a PMBC and a pharmaceutically active substance, known to be useful for treating, inhibiting, or preventing ~~of~~ the disease. The improvement of treatment, inhibition or prevention can thus be achieved, by the selective targeting of the Conjugate to the foci of disease, via targeting to the PNOM-cells comprised within the foci. Examples for such medical disorders are described above. ---

Please replace the paragraph beginning on page 42, line 28 and ending on page 43, line 2 with the following paragraph:

---In the dot plot shown in **Fig. 1A <u>and Fig. 1B</u>**, the left lower quadrant represents the healthy, non-stained fraction of cells. The right lower quadrant represents the newly formed population of cells in the early stages of apoptosis. These cells ~~are~~ still maintain membrane integrity and thus exclude PI. Cells binding both NST705 and PI, i.e., cells in the late stages of apoptosis are represented in the right upper quadrant.---

Please replace the paragraph beginning on line 3 and ending on line 10 of page 43 with the following paragraph:

---The induction of apoptosis was associated with the emergence of a marked, distinct population of cells in the early stages of the apoptotic process, selectively binding NST705 and occupying the right lower quadrant of the plot. The percent of identified early apoptotic events within the population is 70.8% in the apoptotic cells as compared with 3% of the non-treated control cells. **Fig. ~~1B~~ <u>1C</u>** is a histogram analysis of the data presented in Fig. 1A **<u>and 1B</u>**. The emergence of a new and distinct peak of highly fluorescent cells in the early phase of the apoptotic process is clearly associated with anti-Fas treatment. ---

Please replace the paragraph beginning on page 43, line 29 and ending on line 3 on page 44 with the following paragraph:

--- In the dot plot shown in **Fig. 2A and 2B**, the left lower quadrant represents the healthy, non-stained fraction of cells. The right lower quadrant represents the newly formed population of cells in the early stages of apoptosis. These cells ~~are~~ still maintain membrane integrity and thus exclude PI. Cells binding both NST703 and PI, i.e., cells in the late stages of apoptosis are represented in the right upper quadrant.---

Please replace the paragraph beginning on line 4 and ending on line 11 of page 44 with the following paragraph:

-- The induction of apoptosis was associated with the emergence of a marked, distinct population of cells in the early stages of the apoptotic process, selectively binding NST703 and occupying the right lower quadrant of the plot. The percent of identified early apoptotic events within the population is 75.6% in the apoptotic cells as compared with 3.27% of the non-treated control cells. **Fig. ~~2B~~ 2C** is a histogram analysis of the data presented in Fig. 2A **and Fig. 2B**. The emergence of a new and distinct peak of highly fluorescent cells in the early phase of the apoptotic process is clearly associated with anti-Fas treatment ---

Please replace the paragraph beginning on line 24 and ending on line 28 of page 45 with the following paragraph:

--- Fig. 4A **and Fig. 4B ~~is~~ are each** a representative FACS dot plot, showing that activation of apoptosis leads to a marked uptake of DC by cells in the early stages of apoptosis **(Fig. 4B)** , as compared to control cells **(Fig. 4A)**. The *UV-axis* denotes fluorescence intensity of DC; *FL_2-axis* denotes fluorescence intensity of propidium iodide (PI).---

Please replace the paragraph beginning on page 46, line 3 and ending on line 9 with the following paragraph:

---**Fig. 4C** is a flow-cytometric (FACS) histogram representation of the data shown in Fig 4A **and 4B**. The x-*axis* denotes fluorescence intensity of DC, while the *counts axis* denotes the percentage of events. Control cells are marked by a solid line, while anti-Fas-Ab-treated cells are marked by a dotted line. Treatment with the anti-Fas antibody results in a marked shift in the UV fluorescence of cells, reflecting their acquisition of the feature of a marked uptake of DC in the early stage of the apoptotic death process.---